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BIRCH STEWART KOLASCH & BIRCH LLP P O BOX 747 FALLS CHURCH, VA 220400747			HANNETT, JAMES M	
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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/447,430	NAKAYAMA ET AL.
	Examiner James M. Hannett	Art Unit 2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 09 December 2004.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,2,4-9,11-19 and 21-28 is/are rejected.
- 7) Claim(s) 3,10 and 20 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                     | Paper No(s)/Mail Date. _____ .  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____ .                                  |

## DETAILED ACTION

### *Response to Arguments*

Applicant's arguments filed 12/9/2004 have been fully considered but they are not persuasive. The applicant argues that Enomoto can not be relied upon to teach the feature of "in a case in which the designating device does not further designate switching of the image even after a predetermined amount of time has elapsed from the time the image was switched to or from the time the auxiliary lamp was lit, the control device turns off the auxiliary lamp".

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

The examiner points out that Tanaka et al teaches that a user can operate the camera and designate to the camera if the user wants the image displayed on the display to be switched using the control switches (12a-c). Furthermore, the examiner relied upon Enomoto to teach that it was advantageous and common practice to allow the backlight power supply for a LCD of a camera to be turned off if no buttons were pressed or operations performed for a certain amount of time. Furthermore, as stated in the office action if the power down function of Enomoto were applied to the camera of Tanaka et al, the backlight would only be powered down if no operations were performed for a certain amount of time. Therefore, a user pressing buttons (12a-c) would constitute an operation and therefore, the backlight would not power down.

The applicant argues that Tanaka and Enomoto can not be reasonably combined because Tanaka specifically teaches away from the features of Enomoto. The applicant states that Tanaka

teaches that there is a disadvantage to allowing the camera to be automatically turned off since in Tanaka communications to the digital camera is performed regularly ... thereby preventing an automatic off of the power source.

The examiner point out that Enomoto teaches in the abstract of the provided English translation that the power source to the **Back-Light** is turned off after no operations or buttons were pressed for a predetermined amount of time. Enomoto does not teach powered down the power supply to the **Entire-Camera**. Therefore, Enomoto does not teach away from the teachings of Tanaka.

The applicant argues that it is unreasonable for the examiner to assert that the display of frames as disclosed on Jacobsen to be equivalent o the display of images as claimed. The applicant argues that is Jacobsen, an image may be displayed as multiple frames and the frames are scanned to the display very rapidly in succession to display the image. Therefore, the applicant views the scanning of a plurality of frames to be the claimed image. Furthermore, the applicant argues that the examiners assertion that the frames of image data in Jacobson are frames of data for motion video is unreasonable; do to lack of support in the specification of Jacobson.

The examiner asserts that Jacobsen teaches on Column 11, Lines 60-62 that a video signal is scanned into the matrix display. Furthermore, Jacobsen teaches on Column 12, Lines 3-5 that after the video signal is scanned into the matrix display, the backlight is flashed to present the refreshed or New Image. Therefore, Jacobsen clearly teaches that the display can switch from one image to another new image.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Tanaka teaches that it is advantageous to allow a user of a camera to use switches (12a-c) to switch the displayed image on the LCD screen. However, Tanaka is silent as to the ON/OFF state of the backlight power supply during switching of the image.

Jacobsen et al teaches the use of a LCD display screen that can display images. Jacobsen et al teaches on Column 10, Lines 48-55 Column 11, Lines 19-22 and Column 11, Lines 59-67 and Column 12, Lines 1-5 that it is advantageous to have a back light of an LCD display turned off between the shifting of image frames. Jacobsen et al teaches that the backlight is turned on only after a delay to allow the new image data to be displayed on the LCD and to allow the Liquid crystals time to twist. Jacobsen et al further teaches on Column 13, Lines 40-43 that this method is advantageous because it prevents the user from having to view the erasure process of the image on the screen. Therefore, improving the aesthetic appearance of images being displayed on the display.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to enable the camera of Tanaka in view of Enomoto to turn off the back-light between image frames to allow the new image data to be displayed on the LCD and to allow the Liquid crystals time to twist and prevent the user from having to view the erasure

process of the image on the screen. Therefore, improving the aesthetic appearance of images being displayed on the display.

Therefore, the motivation to allow the power to the backlight display to be turned off during a period in which the camera is switching the contents of the display from one image to another image to prevent the user from having to view the erasure process of the image on the screen. Therefore, improving the aesthetic appearance of images being displayed on the display.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 1: Claims 1, 2, 4-9, 11-19, and 21-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,577,338 Tanaka et al in view of JP 10-096619 Enomoto in further view of USPN 6,677,936 Jacobsen et al in further view of USPN 5,748,237 Ueda et al.
- 2: As for Claim 1, Tanaka et al teaches in Figure 1 display device (7) which displays an image on the basis of image data and which switches from display of one image to display of another image using the switches (12a-c); an auxiliary lamp (7b) which illuminates the auxiliary light onto the display device; a designating device for designating switching of an image (12a-c) Tanaka et al teaches on Column 5, Lines 8-28 that the switches 12b and 12c are used to select an image frame to be displayed on the LCD screen. The auxiliary lamp is viewed as the back-light circuitry. Tanaka teaches the use of a control device (12b and 12c) for, in a case in which the

designating device designates switching of an image, controlling the display device such that a displayed image is switched to another image which is then displayed

Tanaka does not teach that when the switch to switch the displayed image is pressed that the auxiliary lamp is turned on, and in the case in which the designating device does not further designate switching of an image even after a predetermined amount of time has elapsed from the time an image was switched to or from the time the auxiliary lamp was lit, the control device turns off the auxiliary lamp.

Enomoto teaches in the abstract and on Paragraph [0013] that it is advantageous when using electrical devices with LCD screens to enable the devices with control circuitry that enables the back-light to go off after no buttons have been pressed or commands executed for a predetermined amount of time. Enomoto teaches that this is advantageous because LCD displays consume a lot of energy and by turning off the back-light after a period of non-use battery life can be preserved.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to enable the camera of Tanaka et al with the circuitry of Enomoto that allows the back-light to be turned on by the pressing of a button and off after a predetermined amount of time when no buttons are pushed in order to preserve the battery life of the camera and decrease energy use.

Tanaka in view of Enomoto does not teach the use of "... in the case in which the designating device designates switching on an image, turning off the auxiliary lamp..."

Jacobsen et al teaches the use of a LCD display screen that can display images. Jacobsen et al teaches on Column 10, Lines 48-55 Column 11, Lines 19-22 and Column 11, Lines 59-67

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and Column 12, Lines 1-5 that it is advantageous to have a back light of an LCD display turned off between the shifting of image frames. Jacobsen et al teaches that the backlight is turned on only after a delay to allow the new image data to be displayed on the LCD and to allow the Liquid crystals time to twist. Jacobsen et al further teaches on Column 13, Lines 40-43 that this method is advantageous because it prevents the user from having to view the erasure of the image on the screen. Therefore, improving the aesthetic appearance of images being displayed on the display.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to enable the camera of Tanaka in view of Enomoto to turn off the back-light between image frames to allow the new image data to be displayed on the LCD and to allow the Liquid crystals time to twist and prevent the user from having to view the erasure process of the image on the screen. Therefore, improving the aesthetic appearance of images being displayed on the display.

Tanaka in view of Enomoto in further view of Jacobsen et al teaches the use of a camera that has a backlight for an LCD display. However, Tanaka in view of Enomoto in further view of Jacobsen et al does not teach that the display is structured such that an image displayed thereon can be confirmed regardless of the existence of the auxiliary light from the backlight.

Ueda et al depicts in Figure 1 and teaches on Column 3, Lines 1-33 and on Column 2, Lines 9-21 the construction of a LCD display panel that includes: an image display portion (2) which displays an image; a light guiding path (9) which guides auxiliary light from the auxiliary lamp (5) to the image display portion (2); Uedo teaches that this construction is advantageous because it allows for the use of both ambient light and a back-light therefore decreasing the

power requirement of the back-light and therefore, saving energy. Ueda et al teaches that the back-light (auxiliary light) can be shut off when there is sufficient ambient light. Therefore, Ueda et al allows for an image to be confirmed regardless of the existence of the auxiliary light from the backlight.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the camera of Tanaka in view of Enomoto in further view of Jacobsen et al with an opening in back of the LCD screen to allow ambient light to pass through the back side of the LCD display to enable a viewer to view the image displayed on the display without requiring the backlight to be on. Ueda et al teaches that this method is advantageous because it saves battery power.

3: In regards to Claim 2, Enomoto further teaches in Paragraph [0015] the use of setting means for setting the predetermined amount of time.

4: In regards to Claim 4, Enomoto teaches that when a button is pressed the back-light will come on. Therefore, when used in the camera of Tanaka et al when the button to switch the image is pressed the back-light will come on. In the case in which the designating device designated switching of an image, the control device turns the auxiliary lamp on when the image to be switched to can be displayed on the display device.

5: As for Claim 5, Ueda et al teaches in Figure 1 and on Column 3, Lines 1-33 the construction of a LCD display panel that includes: an image display portion (2) which displays an image; a light guiding path (9) which guides the auxiliary light from the auxiliary lamp (5) to the image display portion (2); and a semi-transparent film which is disposed between the image display portion and the light guiding path, and which reflects a portion of the light which is

incident through the image display portion. Uedo teaches that this construction is advantageous because it allows for the use of both ambient light and a back-light therefore decreasing the power requirement of the back-light and therefore, saving energy.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the construction of the LCD screen of Uedo for the LCD screen of Tanaka et al in view of Enomoto in view of Jacobsen et al in order to decrease the power requirement of the back-light by allowing for the use of both ambient light and back-light.

6: In regards to Claim 6, Ueda et al teaches in Figure 1 and on Column 3, Lines 1-33 the construction of a LCD display panel that includes: an image display portion (2) which displays an image; a light guiding path (9) which guides auxiliary light from the auxiliary lamp (5) to the image display portion (2); and a semi-transparent film which is disposed between the image display portion and the light guiding path, and which reflects a portion of the light which is incident through the image display portion. Uedo teaches that this construction is advantageous because it allows for the use of both ambient light and a back-light therefore decreasing the power requirement of the back-light and therefore, saving energy. Uedo further teaches on Column 2, Lines 61-67 a light intake means (6) which is connected to the light guiding path, takes in exterior light, and guides the taken-in light to the light guiding path.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the construction of the LCD screen of Uedo for the LCD screen of Tanaka et al in view of Enomoto in view of Jacobsen et al in order to decrease the power requirement of the back-light by allowing for the use of both ambient light and back-light.

7: As for Claim 7, Claim 7 is rejected for reasons discussed related to Claim 1, since Claim 1 is substantively equivalent to Claim 7.

8: In regards to Claim 8, Tanaka et al teaches in Figure 1 display device (7) which displays an image on the basis of image data and which switches from display of one image to display of another image using the switches (12a-c); an auxiliary lamp (7b) which illuminates auxiliary light onto the display device; a designating device for designating switching of an image (12a-c). Tanaka et al teaches on Column 5, Lines 8-28 that the switches 12b and 12c are used to select an image frame to be displayed on the LCD screen. The auxiliary lamp is viewed as the back-light circuitry. Tanaka teaches the use of a control device (12b and 12c) for, in a case in which the designating device designates switching of an image, controlling the display device such that a displayed image is switched to another image which is then displayed. Tanaka further depicts in Figure 4 that the device is a Camera (101) and has a display panel (7). A digital camera having a photographing means for photographing a subject, and an image display device for displaying an image on the basis of image data obtained by photographing the subject by the photographing means.

Tanaka does not teach that when the switch to switch the displayed image is pressed that the auxiliary lamp is turned on, and in the case in which the designating device does not further designate switching of an image even after a predetermined amount of time has elapsed from the time an image was switched to or from the time the auxiliary lamp was lit, the control device turns off the auxiliary lamp.

Enomoto teaches in the abstract and on Paragraph [0013] that it is advantageous when using electrical devices with LCD screens to enable the devices with control circuitry that

enables the back-light to go off after no buttons have been pressed or commands executed for a predetermined amount of time. Enomoto teaches that this is advantageous because LCD displays consume a lot of energy and by turning off the back-light after a period of non-use battery life can be preserved.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to enable the camera of Tanaka et al with the circuitry of Enomoto that allows the back-light to be turned on by the pressing of a button and off after a predetermined amount of time when no buttons are pushed in order to preserve the battery life of the camera and decrease energy use.

Tanaka in view of Enomoto does not teach the use of "... in the case in which the designating device designates switching on an image, turning off the auxiliary lamp..."

Jacobsen et al teaches the use of a LCD display screen that can display images. Jacobsen et al teaches on Column 10, Lines 48-55 Column 11, Lines 19-22 and Column 11, Lines 59-67 and Column 12, Lines 1-5 that it is advantageous to have a back light of an LCD display turned off between the shifting of image frames. Jacobsen et al teaches that the backlight is turned on only after a delay to allow the new image data to be displayed on the LCD and to allow the Liquid crystals time to twist. Jacobsen et al further teaches on Column 13, Lines 40-43 that this method is advantageous because it prevents the user from having to view the erasure of the image on the screen. Therefore, improving the aesthetic appearance of images being displayed on the display.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to enable the camera of Tanaka in view of Enomoto to turn off the back-

light between image frames to allow the new image data to be displayed on the LCD and to allow the Liquid crystals time to twist and prevent the user from having to view the erasure process of the image on the screen. Therefore, improving the aesthetic appearance of images being displayed on the display.

Tanaka in view of Enomoto in further view of Jacobsen et al teaches the use of a camera that has a backlight for an LCD display. However, Tanaka in view of Enomoto in further view of Jacobsen et al does not teach that the display is structured such that an image displayed thereon can be confirmed regardless of the existence of the auxiliary light from the backlight.

Ueda et al depicts in Figure 1 and teaches on Column 3, Lines 1-33 and on Column 2, Lines 9-21 the construction of a LCD display panel that includes: an image display portion (2) which displays an image; a light guiding path (9) which guides auxiliary light from the auxiliary lamp (5) to the image display portion (2); Uedo teaches that this construction is advantageous because it allows for the use of both ambient light and a back-light therefore decreasing the power requirement of the back-light and therefore, saving energy. Ueda et al teaches that the back-light (auxiliary light) can be shut off when there is sufficient ambient light. Therefore, Ueda et al allows for an image to be confirmed regardless of the existence of the auxiliary light from the backlight.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the camera of Tanaka in view of Enomoto in further view of Jacobsen et al with an opening in back of the LCD screen to allow ambient light to pass through the back side of the LCD display to enable a viewer to view the image displayed on the display

with out requiring the backlight to be on. Ueda et al teaches that this method is advantageous because it saves battery power.

9: In regards to Claim 9, Enomoto further teaches in Paragraph [0015] the use of setting means for setting the predetermined amount of time.

10: In regards to Claim 11, Enomoto teaches that when a button is pressed the back-light will come on. Therefore, when used in the camera of Tanaka et al when the button to switch the image is pressed the back-light will come on. In the case in which the designating device designated switching of an image, the control device turns the auxiliary lamp on when the image to be switched to can be displayed on the display device.

11: As for Claim 12, Tanaka et al in view of Enomoto in view of Jacobsen et al teaches the Claimed invention as discussed in Claim 8. However, Tanaka et al in view of Enomoto in view of Jacobsen et al is silent as to the construction of the LCD display panel.

Ueda et al teaches in Figure 1 and on Column 3, Lines 1-33 the construction of a LCD display panel that includes: an image display portion (2) which displays an image; a light guiding path (9) which guides auxiliary light from the auxiliary lamp (5) to the image display portion (2); and a semi-transparent film which is disposed between the image display portion and the light guiding path, and which reflects a portion of the light which is incident through the image display portion. Uedo teaches that this construction is advantageous because it allows for the use of both ambient light and a back-light therefore decreasing the power requirement of the back-light and therefore, saving energy.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the construction of the LCD screen of Uedo for the LCD screen of

Tanaka et al in view of Enomoto in view of Jacobsen et al in order to decrease the power requirement of the back-light by allowing for the use of both ambient light and back-light.

12: In regards to Claim 13, Tanaka et al in view of Enomoto in view of Jacobsen et al teaches the Claimed invention as discussed in Claim 8. However, Tanaka et al in view of Enomoto in view of Jacobsen et al is silent as to the construction of the LCD display panel.

Ueda et al teaches in Figure 1 and on Column 3, Lines 1-33 the construction of a LCD display panel that includes: an image display portion (2) which displays an image; a light guiding path (9) which guides auxiliary light from the auxiliary lamp (5) to the image display portion (2); and a semi-transparent film which is disposed between the image display portion and the light guiding path, and which reflects a portion of the light which is incident through the image display portion. Uedo teaches that this construction is advantageous because it allows for the use of both ambient light and a back-light therefore decreasing the power requirement of the back-light and therefore, saving energy. Uedo further teaches on Column 2, Lines 61-67 a light intake means (6) which is connected to the light guiding path, takes in exterior light, and guides the taken-in light to the light guiding path.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the construction of the LCD screen of Uedo for the LCD screen of Tanaka et al in view of Enomoto in view of Jacobsen et al in order to decrease the power requirement of the back-light by allowing for the use of both ambient light and back-light.

13: As for Claim 14, Tanaka teaches a control device structured to control functionalities of the image display device; A display (7) structured to display a first image based on instructions from the control device; An auxiliary lamp (7b) structured to illuminate auxiliary light onto the

display based on instructions from the control device; and a designating device structured to designate switching of image (12a-c) from the first image to a second image on the display, Tanaka et al teaches on Column 5, Lines 8-28 that the switches 12b and 12c are used to select an image frame to be displayed on the LCD screen. The auxiliary lamp is viewed as the back-light circuitry. Tanaka teaches the use of a control device (12b and 12c) for, in a case in which the designating device designates switching of an image, controlling the display device such that a displayed image is switched to another image which is then displayed

Tanaka does not teach that when the switch to switch the displayed image is pressed that the auxiliary lamp is turned on, and in the case in which the designating device does not further designate switching of an image even after a predetermined amount of time has elapsed from the time an image was switched to or from the time the auxiliary lamp was lit, the control device turns off the auxiliary lamp.

Enomoto teaches in the abstract and on Paragraph [0013] that it is advantageous when using electrical devices with LCD screens to enable the devices with control circuitry that enables the back-light to go off after no buttons have been pressed or commands executed for a predetermined amount of time. Enomoto teaches that this is advantageous because LCD displays consume a lot of energy and by turning off the back-light after a period of non-use battery life can be preserved.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to enable the camera of Tanaka et al with the circuitry of Enomoto that allows the back-light to be turned on by the pressing of a button and off after a predetermined

amount of time when no buttons are pushed in order to preserve the battery life of the camera and decrease energy use.

Tanaka in view of Enomoto does not teach the use of "...in the case in which the designating device designates switching on an image, turning off the auxiliary lamp..."

Jacobsen et al teaches the use of a LCD display screen that can display images. Jacobsen et al teaches on Column 10, Lines 48-55 Column 11, Lines 19-22 and Column 11, Lines 59-67 and Column 12, Lines 1-5 that it is advantageous to have a back light of an LCD display turned off between the shifting of image frames. Jacobsen et al teaches that the backlight is turned on only after a delay to allow the new image data to be displayed on the LCD and to allow the Liquid crystals time to twist. Jacobsen et al further teaches on Column 13, Lines 40-43 that this method is advantageous because it prevents the user from having to view the erasure of the image on the screen. Therefore, improving the aesthetic appearance of images being displayed on the display.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to enable the camera of Tanaka in view of Enomoto to turn off the back-light between image frames to allow the new image data to be displayed on the LCD and to allow the Liquid crystals time to twist and prevent the user from having to view the erasure process of the image on the screen. Therefore, improving the aesthetic appearance of images being displayed on the display.

14: In regards to Claim 15, Tanaka in view of Enomoto in further view of Jacobsen et al teaches the use of a camera that has a backlight for an LCD display. However, Tanaka in view of Enomoto in further view of Jacobsen et al does not teach that the display is structured such that

an image displayed thereon can be confirmed regardless of the existence of the auxiliary light from the backlight.

Ueda et al depicts in Figure 1 and teaches on Column 3, Lines 1-33 and on Column 2, Lines 9-21 the construction of a LCD display panel that includes: an image display portion (2) which displays an image; a light guiding path (9) which guides auxiliary light from the auxiliary lamp (5) to the image display portion (2); Uedo teaches that this construction is advantageous because it allows for the use of both ambient light and a back-light therefore decreasing the power requirement of the back-light and therefore, saving energy. Ueda et al teaches that the back-light (auxiliary light) can be shut off when there is sufficient ambient light. Therefore, Ueda et al allows for an image to be confirmed regardless of the existence of the auxiliary light from the backlight.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the camera of Tanaka in view of Enomoto in further view of Jacobsen et al with an opening in back of the LCD screen to allow ambient light to pass through the back side of the LCD display to enable a viewer to view the image displayed on the display with out requiring the backlight to be on. Ueda et al teaches that this method is advantageous because it saves battery power.

15: As for Claim 16, Tanaka et al in view of Enomoto in view of Jacobsen et al teaches the Claimed invention as discussed in Claim 15. However, Tanaka et al in view of Enomoto in view of Jacobsen et al is silent as to the construction of the LCD display panel. Tanaka et al depicts in Figure 4 that the LCD display screen is formed on the exterior of the camera.

Ueda et al teaches in Figure 1 and on Column 3, Lines 1-33 the construction of a LCD display panel that includes: an image display portion (2) which displays an image; a light guiding path (9) which guides auxiliary light from the auxiliary lamp (5) to the image display portion (2); and a semi-transparent film which is disposed between the image display portion and the light guiding path, and which reflects a portion of the light which is incident through the image display portion. Uedo teaches that this construction is advantageous because it allows for the use of both ambient light and a back-light therefore decreasing the power requirement of the back-light and therefore, saving energy. Uedo further teaches on Column 2, Lines 61-67 a light intake means (6) which is connected to the light guiding path, takes in exterior light, and guides the taken-in light to the light guiding path.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the construction of the LCD screen of Uedo for the LCD screen of Tanaka et al in view of Enomoto in view of Jacobsen et al in order to decrease the power requirement of the back-light by allowing for the use of both ambient light and back-light.

16: In regards to Claim 17, Ueda et al teaches in Figure 1 and on Column 3, Lines 1-33 the construction of a LCD display panel that includes: an image display portion (2) which displays an image; a light guiding path (9) which guides auxiliary light from the auxiliary lamp (5) to the image display portion (2); and a semi-transparent film which is disposed between the image display portion and the light guiding path, and which reflects a portion of the light which is incident through the image display portion.

Tanaka et al teaches that an LCD display screen is formed so that it is exposed to ambient light. Ueda et al uses a viewfinder and all ambient light is blocked by a users eye. Ueda et al

teaches the use of a semi-transparent film that reflects ambient light incident on a surface facing the LCD panel and transmits light incident from a surface opposite the LCD panel. It is therefore, inherent that when the LCD display panel as taught by Ueda et al is used as the display panel of Tanaka et al that ambient light would be incident on the front surface of the display panel and would be transmitted through the LCD panel and reflected back by the reflective surface of the semi-transparent film (11).

17: As for Claim 18, Uedo further teaches on Column 2, Lines 61-67 a light intake means (6) which is connected to the light guiding path, takes in exterior light, and guides the taken-in light to the light guiding path. Ueda et al teaches in Figure 1 and on Column 3, Lines 1-33 the construction of a LCD display panel that includes: an image display portion (2) which displays an image; a light guiding path (9) which guides auxiliary light from the auxiliary lamp (5) to the image display portion (2); and a semi-transparent film which is disposed between the image display portion and the light guiding path, and which reflects a portion of the light which is incident through the image display portion. Uedo teaches that this construction is advantageous because it allows for the use of both ambient light and a back-light therefore decreasing the power requirement of the back-light and therefore, saving energy. Uedo further teaches on Column 2, Lines 61-67 a light intake means (6) which is connected to the light guiding path, takes in exterior light, and guides the taken-in light to the light guiding path.

18: In regards to Claim 19, Enomoto further teaches in Paragraph [0015] the use of setting means for setting the predetermined amount of time.

19: As for Claim 21, Tanaka et al in view of Enomoto in view of Jacobsen et al teaches the Claimed invention as discussed in Claim 1. However, Tanaka et al in view of Enomoto in view

of Jacobsen et al is silent as to the construction of the LCD display panel. Tanaka et al depicts in Figure 4 that the LCD display screen is formed on the exterior of the camera.

Ueda et al teaches in Figure 1 and on Column 3, Lines 1-33 the construction of a LCD display panel that includes: an image display portion (2) which displays an image; a light guiding path (9) which guides auxiliary light from the auxiliary lamp (5) to the image display portion (2); and a semi-transparent film which is disposed between the image display portion and the light guiding path, and which reflects a portion of the light which is incident through the image display portion. Uedo teaches that this construction is advantageous because it allows for the use of both ambient light and a back-light therefore decreasing the power requirement of the back-light and therefore, saving energy. Uedo further teaches on Column 2, Lines 61-67 a light intake means (6) which is connected to the light guiding path, takes in exterior light, and guides the taken-in light to the light guiding path. Furthermore, Uedo depicts in Figure 1 that the light transmitted from the auxiliary lamp is transmitted through the semi-transparent fil and the ambient light from the exterior of the camera is reflected by the semi-transparent film. Furthermore, both the light  $\beta$  and  $\alpha$  are then transmitted and are incident the display (2).

Furthermore a part of that light composed of light rays  $\alpha$  was reflected by the semi-transparent film. The examiner views both sides of the display (2) as being the display side.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the construction of the LCD screen of Uedo for the LCD screen of Tanaka et al in view of Enomoto in view of Jacobsen et al in order to decrease the power requirement of the back-light by allowing for the use of both ambient light and back-light.

20: In regards to Claim 22, Jacobsen et al teaches the use of a LCD display screen that can display images. Jacobsen et al teaches on Column 10, Lines 48-55 Column 11, Lines 19-22 and Column 11, Lines 59-67 and Column 12, Lines 1-5 that it is advantageous to have a back light of an LCD display turned off between the shifting of image frames. Jacobsen et al teaches that the backlight is turned on only after a delay to allow the new image data to be displayed on the LCD and to allow the Liquid crystals time to twist. The examiner views all of the circuitry used to control the camera system as being the control device. Furthermore, although Jacobsen et al does not speak to the specifics of the signal sent to the back light which triggers it to flash after a predetermined amount of time after the liquid crystals have had time to twist, it is viewed by the examiner that the inherent signal sent to the back-light is viewed as a completion signal which is transmitted after the display has been completed (LC's have twisted) and a predetermined amount of time has passed.

21: As for Claim 23, Tanaka et al in view of Enomoto in view of Jacobsen et al teaches the Claimed invention as discussed in Claim 7. However, Tanaka et al in view of Enomoto in view of Jacobsen et al is silent as to the construction of the LCD display panel. Tanaka et al depicts in Figure 4 that the LCD display screen is formed on the exterior of the camera.

Ueda et al teaches in Figure 1 and on Column 3, Lines 1-33 the construction of a LCD display panel that includes: an image display portion (2) which displays an image; a light guiding path (9) which guides auxiliary light from the auxiliary lamp (5) to the image display portion (2); and a semi-transparent film which is disposed between the image display portion and the light guiding path, and which reflects a portion of the light which is incident through the image display portion. Uedo teaches that this construction is advantageous because it allows for the use

of both ambient light and a back-light therefore decreasing the power requirement of the back-light and therefore, saving energy. Uedo further teaches on Column 2, Lines 61-67 a light intake means (6) which is connected to the light guiding path, takes in exterior light, and guides the taken-in light to the light guiding path. Furthermore, Uedo depicts in Figure 1 that the light transmitted from the auxiliary lamp is transmitted through the semi0trasnparat fil and the ambient light from the exterior of the camera is reflected by the semi-transparent film. Furthermore, both the light  $\beta$  and  $\alpha$  are then transmitted and are incident the display (2). Furthermore a part of that light composed of light rays  $\alpha$  was reflected by the semi-transparent film. The examiner views both sides of the display (2) as being the display side.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the construction of the LCD screen of Uedo for the LCD screen of Tanaka et al in view of Enomoto in view of Jacobsen et al in order to decrease the power requirement of the back-light by allowing for the use of both ambient light and back-light.

22: In regards to Claim 24, Jacobsen et al teaches the use of a LCD display screen that can display images. Jacobsen et al teaches on Column 10, Lines 48-55 Column 11, Lines 19-22 and Column 11, Lines 59-67 and Column 12, Lines 1-5 that it is advantageous to have a back light of an LCD display turned off between the shifting of image frames. Jacobsen et al teaches that the backlight is turned on only after a delay to allow the new image data to be displayed on the LCD and to allow the Liquid crystals time to twist. The examiner views all of the circuitry used to control the camera system as being the control device. Furthermore, although Jacobsen et al does not speak to the specifics of the signal sent to the back light which triggers it to flash after a predetermined amount of time after the liquid crystals have had time to twist, it is viewed by the

examiner that the inherent signal sent to the back-light is viewed as a completion signal which is transmitted after the display has been completed (LC's have twisted) and a predetermined amount of time has passed.

23: As for Claim 25, Tanaka et al in view of Enomoto in view of Jacobsen et al teaches the Claimed invention as discussed in Claim 8. However, Tanaka et al in view of Enomoto in view of Jacobsen et al is silent as to the construction of the LCD display panel. Tanaka et al depicts in Figure 4 that the LCD display screen is formed on the exterior of the camera.

Ueda et al teaches in Figure 1 and on Column 3, Lines 1-33 the construction of a LCD display panel that includes: an image display portion (2) which displays an image; a light guiding path (9) which guides auxiliary light from the auxiliary lamp (5) to the image display portion (2); and a semi-transparent film which is disposed between the image display portion and the light guiding path, and which reflects a portion of the light which is incident through the image display portion. Uedo teaches that this construction is advantageous because it allows for the use of both ambient light and a back-light therefore decreasing the power requirement of the back-light and therefore, saving energy. Uedo further teaches on Column 2, Lines 61-67 a light intake means (6) which is connected to the light guiding path, takes in exterior light, and guides the taken-in light to the light guiding path. Furthermore, Uedo depicts in Figure 1 that the light transmitted from the auxiliary lamp is transmitted through the semi-transparent fil and the ambient light from the exterior of the camera is reflected by the semi-transparent film. Furthermore, both the light  $\beta$  and  $\alpha$  are then transmitted and are incident the display (2). Furthermore a part of that light composed of light rays  $\alpha$  was reflected by the semi-transparent film. The examiner views both sides of the display (2) as being the display side.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the construction of the LCD screen of Uedo for the LCD screen of Tanaka et al in view of Enomoto in view of Jacobsen et al in order to decrease the power requirement of the back-light by allowing for the use of both ambient light and back-light.

24: In regards to Claim 26, Jacobsen et al teaches the use of a LCD display screen that can display images. Jacobsen et al teaches on Column 10, Lines 48-55 Column 11, Lines 19-22 and Column 11, Lines 59-67 and Column 12, Lines 1-5 that it is advantageous to have a back light of an LCD display turned off between the shifting of image frames. Jacobsen et al teaches that the backlight is turned on only after a delay to allow the new image data to be displayed on the LCD and to allow the Liquid crystals time to twist. The examiner views all of the circuitry used to control the camera system as being the control device. Furthermore, although Jacobsen et al does not speak to the specifics of the signal sent to the back light which triggers it to flash after a predetermined amount of time after the liquid crystals have had time to twist, it is viewed by the examiner that the inherent signal sent to the back-light is viewed as a completion signal which is transmitted after the display has been completed (LC's have twisted) and a predetermined amount of time has passed.

25: As for Claim 27, Tanaka et al in view of Enomoto in view of Jacobsen et al teaches the Claimed invention as discussed in Claim 14. However, Tanaka et al in view of Enomoto in view of Jacobsen et al is silent as to the construction of the LCD display panel. Tanaka et al depicts in Figure 4 that the LCD display screen is formed on the exterior of the camera.

Ueda et al teaches in Figure 1 and on Column 3, Lines 1-33 the construction of a LCD display panel that includes: an image display portion (2) which displays an image; a light guiding

path (9) which guides auxiliary light from the auxiliary lamp (5) to the image display portion (2); and a semi-transparent film which is disposed between the image display portion and the light guiding path, and which reflects a portion of the light which is incident through the image display portion. Uedo teaches that this construction is advantageous because it allows for the use of both ambient light and a back-light therefore decreasing the power requirement of the back-light and therefore, saving energy. Uedo further teaches on Column 2, Lines 61-67 a light intake means (6) which is connected to the light guiding path, takes in exterior light, and guides the taken-in light to the light guiding path. Furthermore, Uedo depicts in Figure 1 that the light transmitted from the auxiliary lamp is transmitted through the semi-transparent fil and the ambient light from the exterior of the camera is reflected by the semi-transparent film. Furthermore, both the light  $\beta$  and  $\alpha$  are then transmitted and are incident the display (2). Furthermore a part of that light composed of light rays  $\alpha$  was reflected by the semi-transparent film. The examiner views both sides of the display (2) as being the display side.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the construction of the LCD screen of Uedo for the LCD screen of Tanaka et al in view of Enomoto in view of Jacobsen et al in order to decrease the power requirement of the back-light by allowing for the use of both ambient light and back-light.

26: In regards to Claim 28, Jacobsen et al teaches the use of a LCD display screen that can display images. Jacobsen et al teaches on Column 10, Lines 48-55 Column 11, Lines 19-22 and Column 11, Lines 59-67 and Column 12, Lines 1-5 that it is advantageous to have a back light of an LCD display turned off between the shifting of image frames. Jacobsen et al teaches that the backlight is turned on only after a delay to allow the new image data to be displayed on the LCD

and to allow the Liquid crystals time to twist. The examiner views all of the circuitry used to control the camera system as being the control device. Furthermore, although Jacobsen et al does not speak to the specifics of the signal sent to the back light which triggers it to flash after a predetermined amount of time after the liquid crystals have had time to twist, it is viewed by the examiner that the inherent signal sent to the back-light is viewed as a completion signal which is transmitted after the display has been completed (LC's have twisted) and a predetermined amount of time has passed.

*Allowable Subject Matter*

27: Claims 3, 10 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

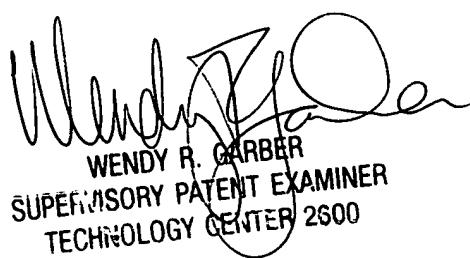
Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M. Hannett whose telephone number is 571-272-7309. The examiner can normally be reached on 8:00 am to 5:00 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 571-272-7308. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James M. Hannett  
Examiner  
Art Unit 2612

JMH  
May 13, 2005



WENDY R. GARBER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600